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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/433,499	11/03/1999	WILLIAM P. BROWN	P99.2275	2643

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EXAMINER
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RIOS CUEVAS, ROBERTO JOSE

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 05/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/433,499

Applicant(s)

BROWN ET AL.

Examiner

Roberto J. Rios

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7, 19-25 and 28-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 19-25 and 28-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5, 6, 19-21, 25, 28, 32 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Hagglund et al (US patent 2,740,014).

As per claim 1, Hagglund et al (herein after Hagglund) teach a fuse arrangement (Figures 1-3) comprising a wiring terminal (6) having a plurality of discrete circuits extending therefrom (Figure 3); a common bus assembly (18, 20, 26); and at least one axial fuse (11) disposed between at least one of the plurality of circuits in the wiring terminal and the common bus terminal for electrically connecting the common bus assembly to at least one of the plurality of discrete circuits through the at least one axial fuse (Figure 3).

As per claim 2, Hagglund teaches a housing having a cover (22) and a base portion (1), wherein the wiring terminal is contained within the base portion and the common bus assembly is contained within the cover of the fuse box (Figure 1).

As per claim 3, Hagglund teaches the fuse comprising two male terminals configured to mate with two respective female terminals portions within the wiring terminal and the common bus assembly (Figure 3).

As per claim 5, Hagglund teaches the common bus assembly further comprising a common bus having a plurality of fuse terminals connections (20) extending therefrom (Figure 3), the common bus and plurality of fuse terminal connections being disposed in a single enclosure (Figure 3).

As per claim 6, Hagglund teaches the wiring terminal including a plurality of discrete circuits that are, in turn, connected to respective electrical loads (Figure 3).

As per claim 19, Hagglund teaches a fuse box arrangement comprising a fuse box having a base (1) and a cover (22), a common bus terminal (18, 20, 26) within the fuse box, the common bus terminal connected to a voltage supply (26); a plurality of wire terminals (6) within the fuse box, each of the plurality of wire terminals connected to a discrete circuit; and a fuse array having at least one axial fuse (11) arranged between the base and the cover of the fuse box, the fuse connecting the bus with the discrete circuit (Figure 3).

As per claim 20, Hagglund teaches the common bus terminal affixed to the cover (Figure 1).

As per claim 21, Hagglund teaches the plurality of wire terminals affixed to the base (Figure 1).

As per claim 25, Hagglund teaches the common bus terminal comprising a plurality of contact terminals (20) that are configured to connect to first terminals of each of the plurality of fuses within the fuse array, wherein the common bus terminal is configured to simultaneously connect all of the contact terminal therein with the first

terminal of each of the fuses when connecting the common bus terminal to the first terminals (Figures 1, 3).

As per claim 28, Hagglund teaches a fuse box comprising a base (1) and a cover (22) that opens with respect to the base; a common bus terminal (20) that attaches to the cover; and a plurality of fuses (11) that electrically couple to the common bus terminal (Figure 2).

As per claim 32, Hagglund teaches the plurality of fuses positioned on a substrate (1, 4) so as to mate with a terminal arrangement defined by the common bus terminal (Figures 1, 3).

As per claim 33, Hagglund teaches the fuses being axial fuses (Figure 3).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 7, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagglund et al.

As per claim 4, Hagglund does not teach the axial fuses comprising female terminals. However, the Examiner takes official notice that to provide a fuse with male/female will be a design choice based generally on the space available and the fuse box structure. The Examiner wants to point out that applicant has failed to seasonably traverse each and every official notice taken in the last office action mailed

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on 09/27/2001. If applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the next reply (i.e., 02/19/2002) after the Office action in which the well-known statement was made (i.e., 09/27/2001), MPEP§ 2144.03.

As per claim 7, Hagglund does not specifically disclose the fuse box housing material. However, the Examiner takes official notice that it is well known in the art to provide a heat conductive housing for the purpose of reducing the heat contained within the housing resulting from high-voltage devices and avoid damaging the devices. The Examiner wants to point out that applicant has failed to seasonably traverse each and every official notice taken in the last office action mailed on 09/27/2001. If applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the next reply (i.e., 02/19/2002) after the Office action in which the well-known statement was made (i.e., 09/27/2001), MPEP§ 2144.03.

As per claim 22 and 23, Hagglund does not specifically teach changing the location of the common bus terminal and the wiring terminal to the base and the cover

respectively. However, the Examiner takes official notice that to shift or alternate the location of the common bus terminal and the wiring terminal would be an engineering design choice that would not modify the isolating and power interruption operation of the fuse box arrangement, In re Japikse, 86 USPQ 70 (CCPA 1950).

5. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagglund et al in view of Morrill, Jr. (US patent 5,027,101 B1).

Hagglund teaches the fuse box comprising an axial fuse (11) but does not specifically disclose the claimed fuse configuration. However, Morrill, Jr (herein after Morrill) teaches an axial fuse comprising a planar, electrically insulating substrate having at least two planar sides; a metallization pattern disposed on at least one side of the planar substrate, said metallization pattern comprising at least one fuse element; a protective coating disposed on at least a respective portion of at least one side of the planar substrate and covering at least a first portion of the metallization pattern; and a second portion of the metallization pattern that is not covered by the protective coating configured as a contact portion (Figures 19-21; col. 15, line 13+).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to substitute Hagglund's fuse with Morrill's fuse for the purpose of maximizing the space available inside the fuse box and reduce the fuse box size.

6. Claims 29 and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over Hagglund in view of Sexton (US patent 4,918,420).

As per claim 29, Hagglund teaches positioning the individual axial fuses on the substrate (1,4) but does not specifically disclose how the fuses are stored previous to

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assembly. However, Sexton teaches a plurality of axial fuses (A, B) stored on carrier strip roll (11).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Hagglund and Sexton such that the plurality of fuses is stored on a roll for the purpose of simplifying the manufacturing and assembly process.

As per claim 30, Hagglund teaches the roll including a flexible carrier strip (10) but does not specifically disclose indexing apertures associated with the fuses. However, the Examiner takes official notice that it is well known in the art to provide indexing means on a fuse carrier in order to facilitate removal of said fuses and avoid cutting said fuses erroneously.

7. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagglund et al in view of Morrill, Jr.

Hagglund teaches the fuse box comprising an axial fuse (11) but does not specifically disclose the claimed fuse configuration. However, Morrill teaches an axial fuse comprising an insulating substrate; a metallization pattern disposed on said substrate, and a protective coating covering at least a portion of the metallization pattern.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to substitute Hagglund's fuse with Morrill's fuse for the purpose of maximizing the space available inside the fuse box and reduce the fuse box size.



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***Response to Arguments***

8. Applicant's arguments with respect to claim 1-7, 19-25 and 28-33 have been considered but are moot in view of the new ground(s) of rejection.

9. Art of general nature has been cited for applicant's review.

Spangler teaches an axial fuse comprising female terminals.

**Communication with PTO**

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rios whose telephone number is (703) 306-5518. In the event that Examiner Rios cannot be reached, his supervisor, Brian Sircus may be contacted at (703) 308-3119. The fax phone number for this group is (703) 305-3432.



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